

WHAT IS CLAIMED IS:

1. An irrigation valve assembly for connecting to lateral sections of irrigation pipes comprising:

a control valve having an inlet port and an outlet port, said ports each having an annular groove in one end thereof;

a connector sub-assembly having a pair of threaded swivel connectors forming an integral part of said inlet port and said outlet port, each swivel connector having a threaded end connectable to a male pipe fitting on the lateral section for allowing said connector sub-assembly to rotate about an axis of said control valve and for allowing the removal of said valve assembly while maintaining the spacing of each of the lateral sections of the irrigation pipe; and

a sealing ring mounted in each of said annular grooves on the ends of said inlet and outlet ports and alignable with the male pipe fitting for providing a seal between said male pipe fitting and the ends of the ports when the threaded end of said swivel connector is connected to said male pipe fitting of the irrigation pipe section.

2. The assembly of claim 1, wherein each of said ports has a shoulder at its outwardly directing end and each of said swivel connectors has an unthreaded end having a shoulder capable of being forced over the corresponding shoulder on each end of the ports.

3. The assembly of claim 2, wherein the threaded ends of said swivel connectors are adjacent the respective ends of the inlet and outlet ports after the treaded ends of said connectors are unthreaded from the pipe fittings prior to removal of said valve assembly.

4. The assembly of claim 3, wherein the swivel connectors move from a first connector position on the respective inlet and outlet ports in which the threaded ends of said swivel connectors are adjacent the respective ends of the inlet and outlet ports to a second connector position in which the threaded ends of said swivel connectors are connected to the male pipe fittings.

5. The assembly of claim 4, wherein the shoulder at the unthreaded end of each of the swivel connectors has an outwardly directing end juxtaposed to an inwardly directing end of the corresponding shoulder on the end of the port.

6. The assembly of claim 5, wherein each of the outwardly directing ends of the swivel connectors abut each of the respective inwardly directing ends when the female threaded ends of said swivel connectors are connected to the male pipe fittings.

7. The assembly of claim 6, wherein sufficient clearance exists between outer surfaces of each of the inlet and outlet ports and inner surfaces of each of the shoulders on the unthreaded ends of the swivel connectors to allow the connectors to freely rotate about the axis of the valve and to allow freedom for lateral movement along the axis before threaded ends of said swivel connectors are connected to the male pipe fittings.

8. The assembly of claim 7, wherein the thickness of the shoulder of each of the swivel connectors and the height of the shoulder of each of the ports are sized to allow one shoulder of being forced over other shoulder and to prevent the connectors from being removed from the control valve.

9. The assembly of claim 8, wherein the shoulder of each of the swivel connectors is forced over the corresponding shoulder of each of the port by compressing the thickness of the swivel connector shoulder, forcing the swivel shoulder over the corresponding shoulder on the ports, and allowing time for the shoulder to resume substantially is original shape.

10. An irrigation valve assembly for connecting to lateral sections of irrigation pipes comprising:

a control valve having an inlet port and an outlet port, said ports each having an annular groove in one end thereof and a shoulder in the other end thereof;

a connector sub-assembly having a pair of threaded swivel connectors forming an integral part of said inlet port and said outlet port, each swivel connector has a female threaded end capable of receiving a male threaded end of a male pipe fitting on the lateral section and an unthreaded end having a shoulder capable of being forced over the corresponding shoulder on each of the other ends of the ports; sufficient clearance being provided between outer surfaces of each of the inlet and outlet ports and inner surfaces of each of the shoulders on the unthreaded ends of the swivel connectors to allow the connectors to freely rotate about a longitudinal axis of the valve and to allow freedom for lateral movement along the axis before the threaded ends of said swivel connectors are connected to the male pipe fittings; said swivel connectors being able to move from a first connector position on the respective inlet and outlet ports in which the threaded ends of said swivel connectors are adjacent the respective ends of the inlet and outlet ports for allowing the removal of said valve assembly while maintaining the spacing of each of the lateral sections of the irrigation pipe to a second connector position in which the threaded ends of said swivel connectors are connected to the male pipe fittings;

a sealing ring mounted in each of said annular grooves on the ends of said inlet and outlet ports and alignable with the male pipe fitting for providing a seal between said male pipe fitting and the ends when the female threaded end of said swivel connector is connected to said male pipe fitting of the irrigation pipe section.

11. The assembly of claim 10, wherein the thickness of the shoulder of each of the swivel connectors and the height of the shoulder of each of the ports are sized to allow one shoulder of being forced over other shoulder and to prevent the connectors from being removed from the control valve.

12. The assembly of claim 11, wherein the shoulder of each of the swivel connectors is forced over the corresponding shoulder of each of the port by compressing the thickness of the swivel connector shoulder, forcing the swivel shoulder over the corresponding shoulder on the ports, and allowing time for the shoulder to resume substantially is original shape.